

CLAIM AMENDMENTS

1. (Currently Amended) A broadcasting service system using a mobile communication terminal, comprising:

a converting unit in a television receiver for converting video and audio signals provided from moving picture information from a TV broadcast station into a format compatible with a signal and transmission standard of a mobile radio communication ~~network~~ system, wherein the converting unit comprises a coding unit which codes the video and audio signals to be compatible with a digital television broadcasting system and formats the coded video and audio signals to be compatible with the mobile radio communication system;

a transmitting unit for transmitting the converted video and audio signals to a mobile communication subscriber terminal through a certain transmission channel of the mobile radio communication ~~network~~ system, the converting unit further comprising:

a controlling unit for varying an encoding rate of the video signals and a transmission bandwidth of the video signals in accordance with telephone call quantity information; and

wherein EPG (Electronic Program Guide) data is formatted and multiplexed together and transmitted with the converted video and audio signals and additional information on the same data stream.

2. (Previously Presented) The broadcasting service system according to claim 1, wherein the video and audio signals are compatible with both a first signal standard and a second signal standard for a television broadcast, the first

and second signal standards being compatible with another signal standard capable of converting between different systems.

3. (Previously Presented) The broadcasting service system according to claim 2, wherein the first signal standard agrees with a MPEG2 (Moving Picture Experts Group 2), the second signal standard agrees with MPEG4 (Moving Picture Experts Group 4), H.26L, H.263, and H.26X formats.

4. (Cancelled)

5. (Previously Presented) The broadcasting service system according to claim 1, wherein the converting unit includes a digital signal converting unit which converts an analog television broadcasting signal into a digital signal, and a coding unit which formats and codes the converted broadcasting signal having moving picture and audio signals.

6. (Previously Presented) The broadcasting service system according to claim 1, wherein the transmitting unit includes an outputting unit which outputs the formatted video and audio signals on said transmission channel, and a formatting-transmission unit which formats and transmits the video and audio signals, along with additional broadcasting information.

7. (Cancelled)

8. (Previously Presented) The broadcasting service system according to claim 1, wherein the transmitting and the converting units transmit data through a connected transmission channel between the mobile communication subscriber terminal and base station.

9. (Currently Amended) The broadcasting service system according to claim 1, wherein the converting and the transmitting units allot at least one transmission channel on the mobile radio communication ~~network~~ system, and transmit the video and audio signals through the allotted channel.

10. (Currently Amended) The broadcasting service system according to claim 1, wherein the broadcasting service system using the mobile radio communication includes an identifying unit which identifies an individual mobile communication subscriber from among all mobile communication subscribers of the video and audio signals, and a payment demanding unit which demands a payment corresponding to a reception of the video and audio signals for the identified individual subscriber.

11. (Currently Amended) A mobile communication terminal, comprising:
a TV broadcast digital video and audio signal reception unit;
a decoder which decodes the TV broadcast digital video and audio ~~signal~~ signals received from a ~~mobile communication network~~ the TV broadcast digital video and audio signal reception unit; and
an outputting unit which outputs the decoded video and audio signal,

wherein the mobile communication terminal receives and decodes the video signal at a rate which varies in accordance with a voice telephone call quantity information and a variable transmission rate of a the mobile radio communication network system; and

wherein the TV broadcast signal comprises multiplexed digital video and EPG signals and the mobile communication terminal includes a receiving-decoding unit which receives and decodes the EPG (Electronic Program Guide) signal from the video signal transmitted from the mobile radio communication network system, and a transmitting unit which transmits a subscriber search answer of the decoded EPG (Electronic Program Guide) signal to a broadcast service system.

12. (Cancelled)

13. (Previously Presented) The mobile communication terminal according to claim 11, wherein the mobile communication terminal is one of a cellular phone, a PCS terminal, or an IMT-2000 terminal.

14. (Currently Amended) The mobile communication terminal according to claim 11, wherein the mobile communication terminal includes a web browser for searching an EPG signal and additional information transmitted from the mobile radio communication network system.

15. (Currently Amended) A broadcasting service system using a mobile communication terminal, comprising:

a digital video and audio input unit which receives digital video and audio signals broadcast from a provider of the pertinent information;

a transcoding unit for converting the digital video and audio signals received from the digital video and audio input unit into a format and transmission rate agreeable to a mobile radio communication network system; and

a transmitting unit for outputting and transmitting the transcoded-converted digital broadcast signals on a certain allotted channel of the mobile communication network;

an EPG (Electronic Program Guide) data converting unit for converting the EPG (Electronic Program Guide) data for selecting a digital broadcast channel into a format agreeable to the mobile radio communication system; and

an additional information converting unit for converting additional information of the digital broadcast signals into a format agreeable to the mobile radio communication system,

wherein an encoding rate of the video signals and a transmission rate of the mobile radio communication network system are varied in accordance with a voice telephone call quantity information.

16. (Cancelled)

17. (Currently Amended) The broadcasting service system according to claim 15, wherein the broadcasting service system provides and transmits the an EPG (Electronic Program Guide) data and additional information as ~~the~~ an agreeable format to the mobile radio communication ~~network~~ system.

18. (Currently Amended) The broadcasting service system according to claim 15, ~~wherein the~~ further including an EPG (Electronic Program Guide) data converting unit includes

a decoder which decodes the inputted EPG (Electronic Program Guide) data of the digital broadcast signals,

a restoring unit which restores the inputted EPG (Electronic Program Guide) data of the digital broadcast signals,

a data base which stores information corresponding to the restored EPG (Electronic Program Guide) data,

an EPG (Electronic Program Guide) information outputting unit which outputs the EPG (Electronic Program Guide) data from the data base corresponding to a subscriber request, and

a converting unit which converts the additional information of the digital broadcast signals into a format agreeable to the mobile radio communication ~~network~~ system.

19. (Currently Amended) A broadcasting service system using a mobile communication terminal, comprising:

a digital signal processing unit for receiving a digital broadcast signal and

providing a broadcast program to a mobile radio communication ~~network~~ system;

a media storing unit for storing the broadcast program processed by the digital signal processing unit;

a data processing and converting unit for converting EPG (Electronic Program Guide) data and additional information processed by the digital signal processing unit into a signal format compatible with the mobile radio communication ~~network~~ system, wherein the data processing and converting unit includes:

an EPG data decoding unit for decoding the EPG data of the digital broadcast signal;

a signal converter for converting the decoded EPG data into a signal format compatible with the mobile radio communication system;

a protocol converter for converting the converted EPG data into a protocol compatible with the mobile radio communication system;

a decoder for decoding the additional information of the digital broadcast signal;

an additional information signal converter for converting the decoded additional information into a signal format compatible with the mobile radio communication system; and

an additional information protocol converter for converting the converted additional information into a protocol compatible with the mobile radio communication system; and

a transcoder and transmission unit for receiving video and audio signals of the broadcast signal and the additional information processed by the digital signal processing

unit and converting the video and audio signals into a signal format compatible with the mobile radio communication ~~network~~ system, and outputting the video and audio signals and the additional information,

wherein an encoding rate of the video signals and a transmission rate of the mobile radio communication ~~network~~ system are varied in accordance with a voice telephone call quantity information.

20. (Previously Presented) The broadcasting service system according to claim 19, the digital signal processing unit includes:

a tuner for selecting the digital broadcast signal received from a television broadcast, a satellite broadcast, or a cable broadcast; and

a demodulator for restoring the selected digital broadcast signal;

a demultiplexer for fetching EPG data and additional information from the demodulated digital broadcast signal; and

a decoder for decoding the video and audio signals from the demodulated digital broadcast signal.

21. (Cancelled)

22. (Currently Amended) The broadcasting service system according to claim 19, wherein the transcoder and transmission unit includes:

a transcoder for transcoding the digital video and audio signals into a format compatible with the mobile radio communication ~~network~~ system;

a transmission rate controller for controlling a transcoder transmission rate compatible the mobile radio communication ~~network~~ system;

a converter for converting the output of the data processing and converting unit into a data protocol compatible with the mobile radio communication ~~network~~ system;

a synchronization processing unit for synchronizing synchronization request information during transcoding and protocol converting; and

a transmitting unit for transmitting the converted data in real time by allotting the converted data to a certain channel of the mobile radio communication ~~network~~ system.

23. (Currently Amended) A broadcasting service method using a mobile communication terminal, comprising the steps of:

converting a TV broadcast signal including digital video and audio signals wherein EPG (Electronic Program Guide) data is formatted and multiplexed together with transmitted with the video and audio signals and additional information in a TV receiver into a format compatible with a signal and transmission standard of a mobile radio communication ~~network~~ system; and

transmitting the converted digital video and audio signals to a mobile communication subscriber terminal through a certain transmission channel of the mobile radio communication ~~network~~ system,

wherein an encoding rate of the video signals and a transmission rate of the mobile radio communication ~~network~~ system are varied in accordance with a voice telephone call quantity information.

24. (Currently Amended) The method according to claim 23, wherein the converting process includes the steps of:

(a) converting the video and audio signals of the TV broadcast signal into the format compatible with a standard and transmission rate of the mobile radio communication ~~network~~ system; and

(b) converting EPG (Electronic Program Guide) data and additional information into the format compatible with the standard and transmission rate of the mobile radio communication ~~network~~ system.

25. (Currently Amended) The method according to claim 23, wherein the transmission process includes the steps of:

(a) synchronization-controlling synchronization request information of the converted digital video and audio signals, EPG (Electronic Program Guide) data, and additional information;

(b) converting the digital video and audio signals, the EPG data, and the additional information into a protocol compatible with the mobile radio communication ~~network~~ system; and

(c) allotting a certain transmission channel and outputting the digital video and audio signals, the EPG data, and the additional information corresponding to

the protocol of the mobile radio communication ~~network~~ system on a certain transmission channel.

26. (Currently Amended) A broadcasting service method using a mobile communication terminal, comprising the steps of:

transmitting a TV broadcast signal having EPG (Electronic Program Guide) data to a subscriber through a mobile radio communication ~~network~~ system when there is a service request for a broadcast from a subscriber;

selecting a channel by searching the transmitted EPG data;

converting video and audio data of the selected channel into a format compatible with a standard of the mobile radio communication ~~network~~ system;
and

transmitting the converted data through a certain transmission channel of the mobile radio communication ~~network~~ system,

wherein an encoding rate of the video signals and a transmission rate of the mobile radio communication ~~network~~ system are varied in accordance with a voice telephone call quantity information; and

wherein the TV broadcast signal comprises multiplexed digital video and EPG signals and the mobile communication terminal includes a receiving-decoding unit which receives and decodes the EPG signal from the video signal transmitted from the mobile radio communication ~~network~~ system, and a transmitting unit which transmits a subscriber search answer of the decoded EPG signal to a broadcast service system.

27. (Previously Presented) The method according to claim 26, further comprising the steps of:

granting a right to the subscriber to watch the requested broadcast; and
providing the EPG data to the subscriber after granting the right.

28. (Previously Presented) The method according to claim 26, further comprising the steps of:

granting an ID to the mobile communication subscriber; and
requiring a payment for the digital broadcasting service from the subscriber
by identifying the ID.

29. (Currently Amended) A broadcasting service system using a mobile communication terminal, comprising:

an analog broadcasting reception unit for receiving an analog television broadcast signal;

a digital converting unit for converting the analog broadcast signal received by the analog broadcasting reception unit into a digital signal;

an encoding-converting unit for converting the digital broadcast signal converted by the digital converting unit into a signal compatible with a mobile radio communication network system; and

an allotting-transmitting unit for allotting the digital broadcast signal by the encoding-converting unit to a certain transmission channel of the mobile radio communication network system, and then transmitting the digital broadcast signal by the encoding-converting unit;

an EPG (Electronic Program Guide) signal and additional information abstracting unit for abstracting EPG signal and additional information;

an encoding-converting unit for converting the abstracted EPG signal and the additional information into a signal compatible with the mobile radio communication system,

wherein the encoding-converting unit and the allotting-transmitting unit control an encoding rate of the video signals and a transmission rate of the mobile radio communication network system, which are varied in accordance with a voice telephone call quantity information.

30. (Cancelled)

31. (Previously Presented) The system according to claim 29, wherein the encoding-converting unit encodes the analog/digital converted broadcast signal into an MPEG4 (Moving Picture Experts Group 4), H.26L, H.263, or H.26X format, and outputs the encoded signal to the certain transmission channel.

32. (Currently Amended) A mobile communication subscriber terminal, comprising:

a TV broadcast reception unit for receiving a TV broadcast signal as moving picture information;

a communication processing unit for receiving a call signal provided to the mobile communication terminal through a mobile radio communication ~~network~~

system, for restoring the call signal, and for outputting a subscriber call signal through the mobile radio communication ~~network~~ system;

a decoder for restoring the broadcast signal received by the broadcast reception unit;

an outputting unit for outputting the broadcast signal restored by the decoder for viewing on the mobile communication terminal; and

a selecting unit for selecting a TV broadcast signal reception mode and a mobile communication telephone call mode,

wherein EPG (Electronic Program Guide) data is formatted and multiplexed together with transmitted with the video and audio signals and additional information, and the mobile communication terminal receives and decodes the broadcast signal at a rate which varies in accordance with a voice telephone call quantity information and a transmission rate of a mobile radio communication ~~network~~ system.

33. (Previously Presented) The terminal according to claim 32, wherein the broadcast reception unit includes an antenna and a tuner, the decoder includes a demodulation unit for demodulating video and audio signals of an analog television broadcasting signal selected from the tuner, and

the outputting unit includes a speaker for outputting the demodulated audio signal and a monitor for displaying the demodulated video signal on the mobile communication terminal when the broadcast signal is an analog television broadcast signal .

34. (Previously Presented) The terminal according to claim 32, wherein the broadcasting reception unit includes a bit stream reception unit for receiving a bit stream from a terminal antenna and a digital broadcast signal, the decoder includes a demodulation and restoring unit for demodulating video and audio signals of the digital broadcast signal and restoring the demodulated video and audio signals, and

the outputting unit includes a speaker for outputting the restored audio signal and a monitor for displaying the restored video signal on the mobile communication terminal when the broadcast signal is the digital broadcast signal .

35. (Previously Presented) The terminal according to claim 32, wherein the mobile communication subscriber terminal is one of a cellular phone, a PCS terminal, or an IMT-2000 terminal.

36. (Previously Presented) The broadcasting service system using a mobile communication terminal according to claim 1, wherein the video signals are television broadcast signals, and the mobile communication subscriber terminal is a cellular phone.

37. (Previously Presented) The broadcasting service system using a mobile communication terminal according to claim 11, wherein the video signal is a television broadcast signal, and the terminal is a cellular phone.

38. (Previously Presented) The broadcasting service system according to claim 1, wherein the controlling unit varies the encoding rate of the video signals in accordance with the telephone quantity information at a base station, so that the video signals do not take all available bandwidth of the base station.

39. (Previously Presented) The broadcasting service system according to claim 19 wherein the controlling unit varies the encoding rate of the video signals in accordance with the telephone quantity information at a base station, so that the video signals do not take all available bandwidth of the base station.